

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/017186 A3

(51) International Patent Classification⁷: **C12Q 1/68**,
C07H 21/04, 21/02

(21) International Application Number:
PCT/US2004/023848

(22) International Filing Date: 26 July 2004 (26.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/493,759 8 August 2003 (08.08.2003) US

(71) Applicant (for all designated States except US):
THOMAS JEFFERSON UNIVERSITY [US/US];
1020 Walnut Street, Philadelphia, PA 19107 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **WONG, Albert, J.**
[US/US]; 416 S. 10th Street, Philadelphia, PA 19147 (US).

(74) Agent: **MONACO, Daniel, A.**; Drinker Biddle & Reath
LLP, One Logan Square, 18th and Cherry Streets, Philadel-
phia, PA 19103-6996 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
6 May 2005

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR RAPID IDENTIFICATION OF ALTERNATIVE SPLICING

(57) Abstract: Alternatively spliced RNA, along with their normally-spliced counterparts, can be rapidly identified by hybridizing cDNA from normal tissue to cDNA from an abnormal or test tissue. The two cDNA populations are separately tagged prior to hybridization, which allows isolation of double-stranded cDNA containing both normal and alternatively spliced molecules. Within this population, pairing of cDNA molecules representing an alternatively spliced mRNA with cDNA molecules representing the counterpart normally spliced mRNA will form double-stranded cDNA with single-stranded mismatched regions. The mismatched double-stranded cDNA are isolated with reagents that bind single-stranded nucleic acids. The strands of each mismatched double-stranded cDNA are then coupled and analyzed, simultaneously identifying both normal and alternatively spliced molecules.



WO 2005/017186 A3